

C/NIC Chrono

25 February 1983

NOTE FOR: DCI
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FROM : C/NIC

1. Apropos our discussion last evening on the question of the intelligence community performance in relation to our "triad" of strategic/arms control estimates, I believe that the principal failing was in predicting the magnitude of the Soviet missile buildup during the 1960s and through 1972. In contrast the monitoring performance has been good.

2. Albert Wohlstetter documented the failings of the predictions in two articles in Foreign Policy magazine in 1974 and 1975. Attached are the relevant graphs of the forecasts from these two articles.


Henry S. Rowen

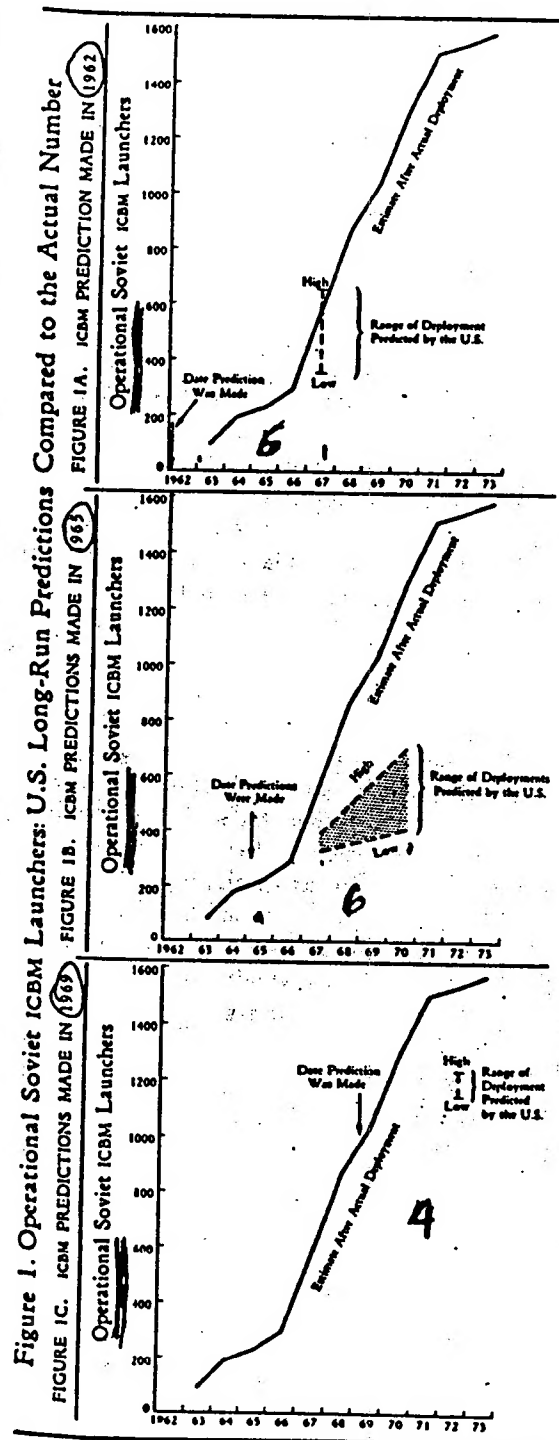
Att: a/s

It is a good idea, then, to subject to systematic test this claim of regular overestimation. Its nearly universal acceptance has emerged from constant repetition of tags like "we are racing ourselves,"⁴ rather than from any numerical comparison of estimates with reality. Figures 1-3 illustrate and Tables 1 and 2 sum up the results of a search of the Secretary of Defense's annual Posture Statements from 1962 to 1972 for all long-term predictions of Soviet strategic missile and bomber deployments, and a comparison of them with what the Russians actually deployed by mid-1972, the last date referred to in the predictions that could then be checked. I use the Posture Statements rather than Intelligence: first because the Secretary made quite precise predictions; second because he assured us that the high end of his range was higher than the highest in the national intelligence estimates; and third because he used his forecasts directly to support defense programs, and so they are more relevant to arms interactions.

The first three charts, Figures 1A to 1C, compare some U.S. predictions of Soviet ICBM launchers to be deployed with the actuality as estimated after the fact. The vertical arrows show when the prediction was made (e.g., February, 1962 in Figure 1A). The dashed line or lines indicate the range from high to low of what was predicted. (In Figure 1A, a high of 650 and a low of 350, by mid-1967, five-and-a-half years later.) Later forecasts usually included (as in Figure 1B) a high and a low for more than one year. This is shown in the shaded portion. The steeply rising solid line, which is the same in all the charts, shows the number the Russians actually completed, as estimated after the fact.

Though the claim about invariable overestimation posits that at least the middle of the range between high and low always ex-

⁴e.g., Lipton and Rodberg, *op. cit.*, p. 303; Wiesner, ABM: Yes or No, p. 18; Panofsky, "Roots of the Strategic Arms Race: Ambiguity and Ignorance," Bulletin of the Atomic Scientists, June 1971, p. 15.



Predictions exclude short-term estimates that are limited essentially to the completion of launchers already started. "Actual number" refers to official estimates made after the ICBM's were deployed.

Figure 2
Operational Soviet Sub-Launched
Missiles: 1965 U.S. Long-Run
Predictions Compared to the
Actual Number

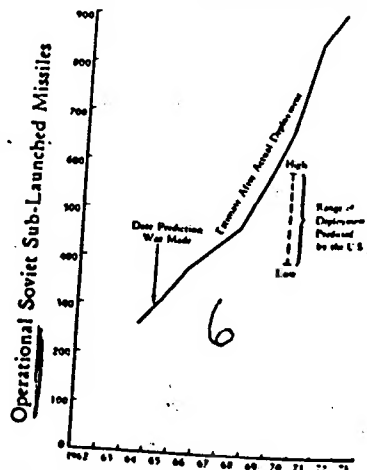
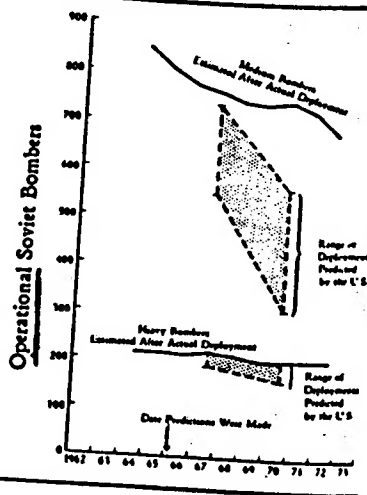


Figure 3
Operational Soviet Bombers:
1966 U.S. Predictions
Compared to the Actual Number



Predictions exclude short-term estimates that are limited essentially to the completion of launchers already started.

ceeds reality, it will be apparent that even the high end of the range seldom did that, and then only at the start of the period—and even then just barely. For ICBM's, the "highs" reached as high as reality only twice in 11 times. The prediction made in 1965 is quite typical. Figures 2 and 3 illustrate analogously typical long-run predictions of future Soviet submarine-launched missiles deployed and future Soviet bomber deployments. The middle of the predicted range of the number of sub-launched missiles deployed was about three-fourths of the even-

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tual reality. In the case of the bombers, we continued to believe that the Russians were going to phase them down and most drastically in the case of the medium bombers; but the Soviets never came down to our expectations. Tables 1 and 2 sum up some principal results. Out of 51 predictions, the low end of the range never exceeded the actual; the mean between the high and low exceeded it only twice in 51 times; our highs reached reality only nine times! Hardly a record of overestimation. Moreover, the ratios of predicted-to-actual future values of the Soviet strategic force in operation display the fact that the underestimates were very substantial and that even the average of the highs was under the reality. Analysis also makes it evident that there was no systematic learning from the past as information accumulated.

In fact, since the estimates shown refer to the cumulative number of strategic vehicles in operation at future dates, and since later predictions were based on more extensive knowledge of what was already deployed or at least started in construction at the time of the prediction, the degree of bias can be made even plainer.

First, our means of acquiring information improved greatly over the period. Second, in later years a much larger proportion of the cumulative total in operation was already in operation at the time predictions were made. And third, we had information not only about the number of launchers completed and in operation (displayed in the rising curves of Soviet ICBM and SLBM launchers) but also about the substantial numbers of launchers that had been started but not completed at the time a prediction was made. We knew that ICBM's started would generally be completed, say, in about a year-and-a-half, and submarine-based missile launchers in about two-and-a-half years, but in any case well before the dates in our long-run predictions. In fact, estimates of the missile launchers already started that were expected to be completed by a given time averaged,

Figure 3
Air Force and official consensus predictions
made in fall 1962

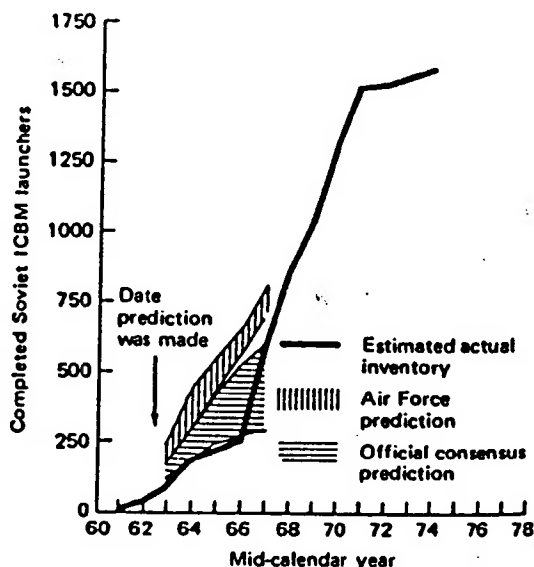
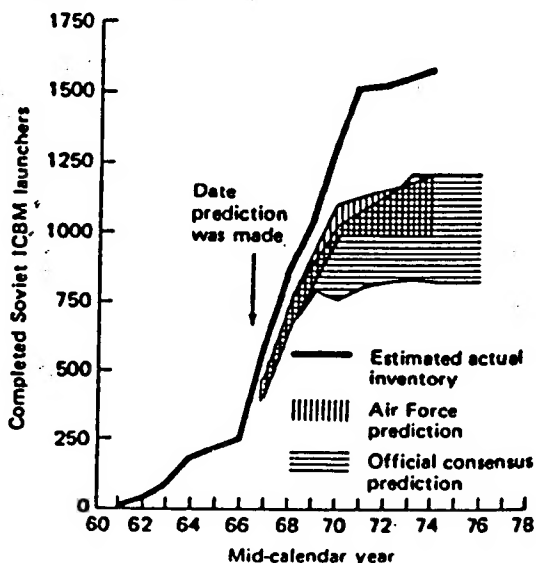


Figure 4
Air Force and official consensus predictions
made in fall 1966



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below the 1967 reality and the "high" barely reached it. In fall 1963, the Air Force predictions still greatly exceeded the consensus, but the two began to converge. There was some overlap between them in the early years referred to in the prediction, and in the more distant years, where the Air Force outbid the consensus, even its high dropped below reality. In fall 1964 the Air Force and official predictions came close together and overlapped for the first time in predictions about the more distant years. For these more distant years, even the Air Force highs were below reality, though the Air Force still exceeded the consensus. In fall 1965 and 1966 (Figure 4) underestimation worsened with further convergence. Finally, in fall 1967, convergence was total. The Air Force endorsed the consensus on condition that the Soviets would deploy MRVs (Multiple Re-entry Vehicles—unlike MIRVs, not aimed independently), which they did. The highs of the long-term forecasts in these last years through 1967 were invariably under reality, and both the consensus and the Air Force assumed an ultimate leveling off of the Russian program well below what happened. In fall 1968 the Air Force concurred with the consensus on the assumption, now clearly conservative, that MIRVs would be deployed by mid-1978.

The steady movement toward the official forecasts suggests the power of consensus. That power is particularly impressive since final convergence occurred in fall 1967, which (McNamara observed the following January) marked a 380-silo jump from fall 1966. Deviation from the consensus on the high side went out of style just as it became objectively most plausible.

Why?

Pressures for conformity in the 1960s tended to operate against overestimating offense deployment. Overestimating rather than error had become disreputable. For example, the Secretary, in January 1964, stressed that "these longer-range projections